

REMARKS

Claim 2 was rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Emmert.

In the statement of the rejection the Examiner referred to Figs. 15, 16A and 16B, and to related portions of the patent text, asserting the disclosure of a flexible printed circuit board corresponding to that claimed. This rejection is traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). In imposing a rejection under 35 U.S.C. § 102 the Examiner is required to specifically identify wherein an applied reference is perceived to identically disclose each and every feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). That burden has not been discharged. Moreover, there is a significant difference between the claimed flexible printed circuit board and Emmert's circuit element that scotches the factual determination that Emmert discloses a flexible printed circuit board identically corresponding to that claimed.

Specifically, the printed circuit board defined in independent claim 2 comprises, *inter alia*, first and second path portions in substantially symmetrical shapes with each other about a predetermined straight line, and the flexible printed circuit board is folded up along that straight line. No such structure is disclosed or suggested by Emmert.

Applicants **stress** that Emmert neither discloses nor suggests forming first and second path portions in substantially symmetrical shapes with each other about a predetermined straight line, and folding up a flexible printed circuit board along that straight line.

On page 3 of the September 30, 2004 Office Action, the Examiner refers to Fig. 15, and to column 8 of Emmert, lines 47 through 50, asserting that the disclosed printed circuit board is folded about a horizontal straight line. That determination is **not accurate**. In point of fact, neither Fig. 15, nor any other part of the patent to Emmert identified by the Examiner, remotely suggests forming a flexible printed circuit board symmetric about a line and folding it up along a straight line.

Further, Applicants would point out that in accordance with Emmert's construction, as apparent from Figs. 16A and 16B, and the related discussion thereof appearing in column 11, lines 15 through 19, signal lines 2726 run **through vias** 2728 to reach the **reverse side** of the flexible printed circuit. In other words, the disclosed flexible printed circuit board is composed of a **single board**. It is, therefore, apparent that Emmert's construction is completely **different** from that of the present invention, wherein **two path portions** that are symmetric about a line are **folded** up along a straight line.

The above argued fundamental structural difference between the claimed flexible printed circuit board and Emmert's circuit board undermines the factual determination that Emmert discloses a flexible printed circuit board identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, submit that the imposed rejection of claim 2 under 35 U.S.C. §

102 for lack of novelty as evidenced by Emmert is not factually viable and, hence, solicit withdrawal thereof.

Claims 1 and 3 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Emmert.

In the statement of the rejection the Examiner addressed **claim 1** by referring to various figures and text in Emmert, but admitted that Emmert does not disclose the concept of shielding the circuit. The Examiner then took official notice of shielding and concluded that one having ordinary skill in the art would have been motivated to modify Emmert's circuit by providing shielding. As to **claim 3**, the Examiner also made certain factual determinations as to the teachings of Emmert, admitted the absence of shielding, but concluded that one having ordinary skill in the art would have been motivated to modify Emmert's circuit by providing shielding. This rejection is traversed.

The flexible printed circuit board defined in **independent claim 1** is structured such that **only the second insulating sheet is provided with a shielding conductor**. Therefore, by folding up the flexible printed circuit board, the signal lines are sandwiched between different parts of the second insulating sheet. In other words, a shielding conductor is formed only on one side of the flexible printed circuit board **before**, repeat **before**, it is folded up. This structure is neither disclosed nor suggested by Emmert. Indeed, Emmert makes no mention of bending a flexible printed circuit board.

This **structural difference** between the claimed printed circuit board and Emmert's printed circuit board is **functionally significant**. In short, by providing **only** the second insulating sheet with a shielding conductor and folding up the printed circuit board to **sandwich** the signal lines between different parts of the second insulating film, it is possible to form, in a single process,

shielding conductors on both sides of the end product. **If** such shielding conductors are formed **after** the flexible printed circuit board is folded up, two shielding conductors need to be formed **separately** on the obverse and reverse sides. This disadvantageously requires **two separate processes**.

It is, therefore, apparent that there are functionally significant structural differences between the flexible printed circuit board defined in claim 1 and Emmert's printed circuit board. There is **no** apparent **factual** basis upon which to predicate the conclusion that one having ordinary skill in the art would have been realistically impelled to dramatically modify Emmert's printed circuit board to arrive at the claimed invention. *Teleflex Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 63 USPQ2d 1374; 1387 (Fed. Cir. 2002); *In re Lee*, 237 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Applicants, therefore, submit the imposed rejection of claim 1 is not viable.

As to **independent claim 3**, Applicants would refer to the arguments previously advanced in traversing the imposed rejection of claim 2. Specifically, Emmert neither discloses nor suggests bending a flexible printed circuit board. Moreover, Emmert's flexible printed circuit board is composed of a **single board**. Clearly, Emmert's construction is completely different from that of the present invention, wherein two path portions that are symmetric about a line are folded up along a straight line.

There is no apparent factual basis upon which to predicate the conclusion that one having ordinary skill in the art would have been motivated to modify Emmert's telephone terminal to arrive at the invention defined in independent claim 3. *Teleflex Inc. v. Ficosa North America Corp.*, *supra*; *In re Lee*, *supra*. Applicants, therefore, submit that the imposed rejection of claim 3 under 35 U.S.C. § 103 is not viable.

Based upon the foregoing it should be apparent that a *prima facie* basis to deny patentability to the inventions defined in claims 1 and 3 has not been established. Applicants, therefore, submit

that the imposed rejection of claims 1 and 3 under 35 U.S.C. § 103 for obviousness predicated upon Emmert is not factually or legally viable and, hence, solicits withdrawal thereof.

Claims 4 and 5 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Emmert in view of Inoue.

In the statement of the rejection the Examiner addressed claim 4 by concluding that one having ordinary skill in the art would have been motivated to modify Emmert's flexible circuit by providing a helical shaped hinge portion in view of Inoue. As to claim 5 the Examiner concluded the use of an adhesive backing is inherent. This rejection is traversed.

As to **independent claim 4**, Applicants would again stress that Emmert neither discloses nor suggests the notion of forming first and second path portions in substantially symmetrical shapes with each other about a predetermined straight line, and folding up a flexible printed circuit board along the straight line. Emmert is conspicuously mute with respect to a structure wherein two path portions that are symmetric about a line are folded up along a straight line. The secondary reference to Inoue does not cure this argued deficiency of Emmert. Accordingly, even **if** the applied references are combined as suggested by the Examiner, and Applicants do **not** agree that the requisite fact-based motivation has been established, the claimed invention would **not** result.

Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988)

Claim 5 is patentable by virtue of its dependence upon independent claim 4, the patentability of which has been argued *supra*. Moreover, Applicants separately argue the patentability of claim 5 which requires a displacement preventing means provided at one end of the path portions. This construction is particularly effective in situations where a flexible printed circuit board is folded up so as to be wound around at a hinge portion.

Specifically, if adhesive is applied to both ends of the path portions, when the flexible circuit board is wound around in a hinge portion, the deformation of the flexible printed circuit board is concentrated in an essential portion thereof, i.e., the portion where it is wound around, causing the flexible printed circuit board to rub against the inside of the hinge portion of the body.

However, when adhesive is applied only to one end of the path portion, the deformation does not concentrate in the central portion thereof but is spread over the other end, thereby preventing the flexible printed circuit board from rubbing against the inside of the hinge portion of the body. That concept is neither disclosed nor suggested by Inoue, merely provides a sticking member on an EL display.

It should, therefore, be apparent that a *prima facie* basis to deny patentability to the claimed inventions has not been established. Applicants, therefore, submit that the imposed rejection of claims 4 and 5 under 35 U.S.C. § 103 for obviousness predicated upon Emmert in view of Inoue is not factually or legally viable and, hence, solicits withdrawal thereof.


Based upon the foregoing it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

Application No.: 10/069,622

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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